



## Preterm Labor Counseling During Prenatal Care

### Inside This Issue

	Page
Preterm Labor	1
Demographics	2
Preterm Labor	2
Preterm Labor and PNC Discussion	3
Associations of Preterm Labor	3
About Michigan's PRAMS	4
CSHCS	4

### Points of Interest

- Over 14% of women reported that preterm labor was not discussed during their PNC.
- Preterm birth was significantly associated with having no discussion of preterm labor during PNC.
- Women who were: white, 35 years of age or older, and started PNC late or never were the least likely to report preterm labor discussion.

Regardless of the increase in the survival rates and decrease in morbidity due to the technologic advances in perinatal and neonatal medicine, preterm births (before the 37<sup>th</sup> week of pregnancy) have remained a burden for the family as well as society (1). Infants born prematurely are more likely to be low birth weight and at an increased risk for complications leading to long-term hospitalization as well as special health care needs such as cerebral palsy, blindness, lung diseases, learning disabilities, and developmental disabilities.

The goal of US Healthy People 2010 Objective 16-11a is to decrease preterm birth to 7.6% nationally (2). However, the rate of preterm births in Michigan increased from 10.7% in 1990 to 11.9% in 2003, which translates into an 11% increase compared to a 16% increase nationally (3).

The majority of these preterm births are most likely a consequence of preterm labor, the leading cause of perinatal morbidity and mortality in the United States. Despite four decades of research, there are still many unknowns regarding its

causes. The early diagnosis of preterm labor is difficult and has a high false-positive rate (3). However, the recognition of early signs is extremely important and every pregnant woman should be aware of the associated risks. Therefore, the education component of prenatal care (PNC) is essential, especially for those identified at risk (e.g. prior preterm births).

This newsletter uses the PRAMS questionnaire to explore the education about preterm labor offered by providers during PNC visits.

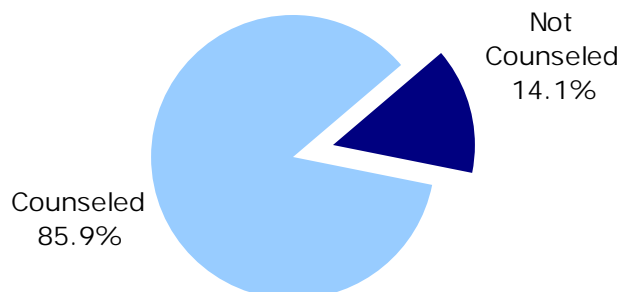
### Preterm Labor

PNC visits provide women with important information about their pregnancy and address

any concerns these women may have. The Michigan PRAMS survey ascertains information about preterm

labor discussed during the PNC visit from the following question: *During any of your prenatal care visits, did a doctor, nurse, or other health care worker talk with you about what to do if your labor starts early?*

Between July 2001 through December 2003, approximately 85.9% reported having preterm labor discussed (Figure 1). In addition, about 10.2% of Michigan women had a baby who was born preterm.



**Figure 1:** Prevalence of Preterm Labor Counseling During Prenatal Care Visits, Jul 2001- Dec 2003 MI PRAMS

## Preterm Labor Information

The signs and symptoms of preterm labor vary from woman to woman. The following is a list of common symptoms:

- ♦ Contractions which are 10 or less minutes apart.
- ♦ Low, dull backache.
- ♦ Pelvic pressure.
- ♦ Cramps that feel like you are having your period.
- ♦ Abnormal cramps with or without diarrhea
- ♦ Vaginal spotting or bleeding
- ♦ Any change in vaginal discharge.

Because some cases of preterm labor can be halted, it is important for women to be able to recognize these signs (4). Women are at an increased risk of preterm labor if they:

- ♦ Had a previous preterm birth.
- ♦ Are pregnant with multiples.
- ♦ Have certain uterine or cervical abnormalities.
- ♦ Smoke, drink alcohol or use illegal drugs.
- ♦ Have late or no prenatal care.
- ♦ Have urinary or vaginal infections, diabetes, high blood pressure, or clotting disorders (5).

## Demographics

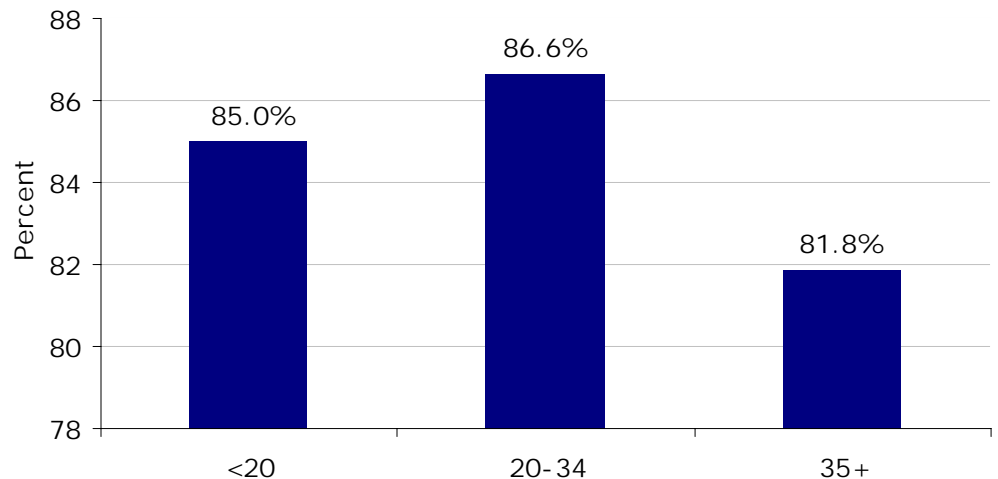
When stratified by maternal race, women who self-identified as Black reported a slightly higher rate (88.3%) of receiving information about preterm labor than White women (85.4%). Additionally, Black women were almost three times more likely to report a preterm birth than White women (16.7% and 9.0% respectively).

Further, preterm labor discussion was stratified by maternal by age.

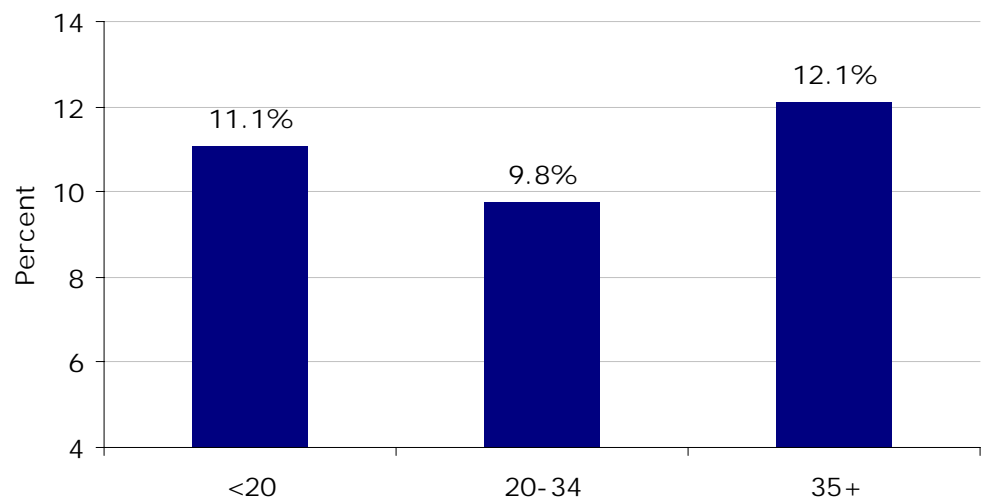
Women between 20-34 years of age were the most likely to learn what to do about preterm labor during their prenatal visits (86.6%) and had the lowest rate of preterm birth (9.8%). Women over 35 were the least likely to learn about preterm labor (81.8%) and had the highest rate of preterm birth (12.1%) (Figure 2 and Figure 3).

When comparing by education, the rates of reported early labor

counseling during PNC ranged from the highest at (88.0%) among women with a college degree to the lowest among women with only a high school degree/GED reporting the lowest rate (84.0%). The rate of preterm births by education was inversely proportional to these findings: women with a college degree had the lowest rate of preterm birth <sup>5</sup>(9.0%) whereas women with a high school



**Figure 2:** Prevalence of Preterm Labor Counseling During Prenatal Care Visits Stratified by Maternal Age, Jul 2001- Dec 2003 MI PRAMS



**Figure 3:** Prevalence of Preterm Births Stratified by Maternal Age, Jul 2001- Dec 2003 MI PRAMS

degree/GED had the highest rate (11.2%).

Similar rates of preterm labor discussion were reported among women who reported either “ever” or “never” being on Medicaid (84.5% vs. 86.7

respectively). However, the rate of preterm births was higher among the Medicaid “ever” recipients (11.3%) compared to Medicaid “never” recipients (9.5%). Preterm births are associated with a

multitude of risk factors that should be accounted for. These results suggest that early labor counseling during PNC visits may have an impact in preventing preterm births.

## Preterm Labor and PNC Discussion

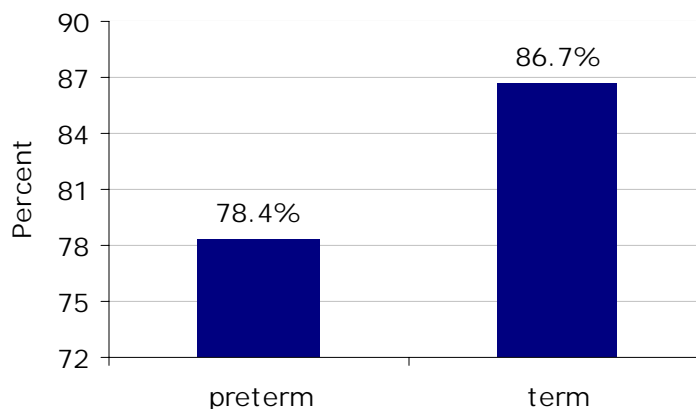
The Institute of Medicine recommends that women have early initiation of PNC, in the first trimester of pregnancy (6). It is essential that during these visits women are given information about the early signs and what to do about preterm labor.

Women who entered PNC late reported a lower rate of preterm labor discussion than those women who had entered PNC before 12 weeks of pregnancy (82.7%, 86.7% respectively). Further, women who had either late entry or never entered PNC may not have had the opportunity to learn about early labor. The rate of

early births in this group is higher (12.2%) compared to those who had entered PNC in the 1<sup>st</sup> trimester (9.7%).

Moreover, there is a higher percent (86.7%) of

women with a term infant who reported having discussed about early labor with their PNC provider compared to 78.4% of those who had a preterm infant (Figure 4).



**Figure 4:** Prevalence of Preterm Labor Counseling During Prenatal Care Visits Stratified by Gestational Age, Jul 2001- Dec 2003 MI PRAMS

## Associations of Preterm Labor Discussion

The association of preterm birth with early labor discussion during PNC was measured using both a crude and adjusted odds ratios. When controlling for certain risk factors including maternal age, maternal race, insurance status, early versus late PNC entry, and self-reported preterm labor we found an association between not having counseling about early labor during PNC and

preterm birth (Adjusted OR: 1.98, 95%CI: 1.52, 2.59).

As expected, self-reported preterm labor was found to be significantly associated with preterm birth (Adjusted OR: 5.09, 95%CI: 4.07, 6.39). Also, Black women were found to have a significantly higher risk of preterm birth than White women (Adjusted OR: 1.95, 95%CI: 1.48, 2.59).

### Recommendations

- ♦ Promote among health care providers the need and importance of preterm labor counseling during PNC visits.
- ♦ Ensure that all pregnant women know about the signs of preterm labor and the associated risks.

1. Von Der Pool, B. A. Preterm Labor: Diagnosis and Treatment. *American Family Physician*. 1998 May; 57: 2457-64.
2. United States Dept. of Health and Human Services. *Healthy People 2010: Understanding and Improving Health*. Jan 2001.
3. Martin JA, Hamilton BE, Sutton PD, Ventura SJ, Menacker F, Munson ML. Births: Final Data for 2003. Hyattsville, MD: National Center for Health Statistics. 2005 Sept. 54(2).
4. MayoClinic.com. Preterm Labor: Prevention is Key Perinatal Data Center. Born Too Soon and Too Small in the United States. Available at <http://www.marchofdimes.com/peristats/pdflib/195/99.pdf>. Accessed on Jan 3, 2006.
5. March of Dimes. Preterm labor. Available at [http://www.marchofdimes.com/pnhec/188\\_1080.asp](http://www.marchofdimes.com/pnhec/188_1080.asp). Accessed on Dec. 29, 2005.
6. Institute of Medicine, Committee to Study the Prevention of Low Birth Weight. Preventing low birth weight. Washington, DC: National Academy Press, 1985.
7. Grigorescu V, Paustian M, Copeland G, ElReda D, Baker G. Contribution of Preterm Births to the Population of Michigan's Children's Special Health Care Services Program. *Journal of Registry Management*. 2005; 32(3):132-136.



Jennifer M. Granholm, Governor  
Janet Olszewski, Director

**For More Information**

**Contact:**

**DFCH/PRAMS**

**Washington Square Building**

**109 W. Michigan Ave, 3rd Floor**

**Lansing, MI 48913**

**Phone: (517) 335-9398**

**E-Mail:**

**[bouraoui@michigan.gov](mailto:bouraoui@michigan.gov)**

Past and future editions of the MI PRAMS Delivery newsletter are available electronically at:  
<http://www.michigan.gov/prams>

## About Michigan's PRAMS

The Pregnancy Risk Assessment Monitoring System (PRAMS), a population-based survey, is a CDC initiative to reduce infant mortality and low birth weight. It is a combination mail/telephone survey designed to monitor selected self-reported maternal behaviors and

experiences of women who delivered a live infant in Michigan that occur before and during pregnancy, as well as early-postpartum periods. Information regarding the health of the infant is also collected for analysis. Annually, over 2,000 mothers are selected at random to participate from

a frame of eligible birth certificates. Women who delivered a low-birth weight infant were over-sampled in order to ensure adequate representation. The results are weighted to represent the entire cohort of women who delivered during that time frame.

### Children's Special Health Care Services

Children's Special Health Care Services (CSHCS) is a program within the Michigan Department of Community Health, which provides medical coverage for children and some adults with special health care needs. Children under 21 years of age with a qualifying medical condition are eligible for CSHCS. Between 2001-2003, approximately one in four children enrolled in CSHCS was born prematurely (7). For more information about CSHCS, please contact the Family Phone Line at 1.800.359.3722.

## Suggested Citation

Patel R, Grigorescu V, Bouraoui Y, Paterson D, Huisingh C. Michigan Department of Community Health. "Preterm Labor Counseling During Prenatal Care." MI PRAMS Delivery. Volume 5, Number 1. Family and Community Health, Michigan Department of Community Health, January 2006.